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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,439	04/22/2004	Anand Mahadeo Gole	033432-009	6324

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EXAMINER

WALLENHORST, MAUREEN

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/829,439	<b>Applicant(s)</b> GOLE ET AL.	
	<b>Examiner</b> Maureen M. Wallenhorst	<b>Art Unit</b> 1743	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7-19 and 21-40 is/are rejected.
- 7) ☒ Claim(s) 3, 6 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The disclosure is objected to because of the following informalities: On page 1 of the specification in the first sentence (continuation information), the phrase --now abandoned, -- should be inserted after the phrase "application Serial no. 10/024,172, filed December 21, 2001" so as to update the status of the parent application.

Appropriate correction is required.

2. Claims 7-11, 21-25 and 28-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On line 2 of claim 7, the phrase "the film layer" lacks antecedent basis. See this same problem on line 1 of claim 21, and on line 1 of claim 34.

Claim 28 is indefinite since the preamble of the claim recites a method of glucose sensing. However, none of the steps of the method recite how glucose is sensed. It is suggested to incorporate the limitations of claim 29 into claim 28.

On line 1 of claim 31, the phrase "the gold salt" lacks antecedent basis.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 4-5, 7-8, 12-19, 21-22, 26-32, 34-35 and 39-40 are rejected under 35

U.S.C. 102(a) as being anticipated by Gole et al.

Gole et al teach of a gold-nanoparticle composite film comprising gold ions diffused in a lipid film that is deposited on a substrate. A 500 angstroms thick fatty amine film such as octadecylamine (ODA) is first thermally evaporated onto a substrate such as quartz, silicon, or quartz crystals. The substrate is then immersed in a solution of chloroauric acid so as to cause gold ions in the form of chloroaurate to diffuse into the lipid film. Gole et al teach that the substrate containing gold ions in the lipid film can then be immersed in a 0.5M glucose solution. The glucose causes the reduction of the chloroaurate ions that results in the formation of a dark violet color. Gole et al teach that the composite lipid film containing gold ions can be used in a dip-stick method for the colorimetric detection of glucose. The article to Gole et al has a different inventive entity than the instant application, and this article was published on August 30, 2001, which is before the effective filing date of the instant application.

6. Claims 1-2, 4-5, 7-8, 12-14, 16-19, 21-22 and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Patil et al.

Patil et al teach of an organic-inorganic composite film comprising gold ions diffused into a lipid film on a substrate. The composite is formed by thermally evaporating a fatty amine

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such as octadecylamine onto a substrate such as quartz or quartz crystal. The fatty amine layer can be either 250, 500 or 1000 angstroms thick. The film is then immersed into a solution of chloroauric acid, which results in the deposition of chloroaurate ions into the film.

7. Claims 1-2, 4-5, 7, 9, 12, 14, 16-19, 21, 23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Lala et al.

Lala et al teach of a nanocomposite film comprising colloidal gold particles in a fatty acid matrix. To form the film, a fatty acid such as arachidic acid is thermally evaporated onto a substrate such as a quartz, silicon or quartz crystal substrate. The film of arachidic acid is about 1000 angstroms thick. The substrate is then immersed into a solution of chloroauric acid, which causes chloroaurate ions to deposit into the lipid film.

8. Claims 3, 6 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims since none of the prior art of record teaches or fairly suggests the use of auric chloride deposited in a lipid film, and the use of a transparent polymer for the substrate in a lipid composite film.

9. Claims 10-11, 24-25, 33 and 36-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims since none of the prior art of record teaches or fairly suggests the use of octadecanol or 1-phosphatidylethanolamine as the lipid in a lipid composite film deposited on a substrate.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please make note of: Mandal et al, Damle et al and Sastry et al who all teach of gold nanoparticle thin films containing gold ions diffused into a lipid film on a substrate; and Yu, Tomasco et al, Adams, Jr. et al and Free who all teach of test strips/substrates for detecting glucose in a sample by a colorimetric reaction.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-1266. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maureen M. Wallenhorst  
Primary Examiner  
Art Unit 1743

mmw

July 21, 2004

*Maureen M. Wallenhorst*  
MAUREEN M. WALLENHORST  
PRIMARY EXAMINER  
GROUP 1700